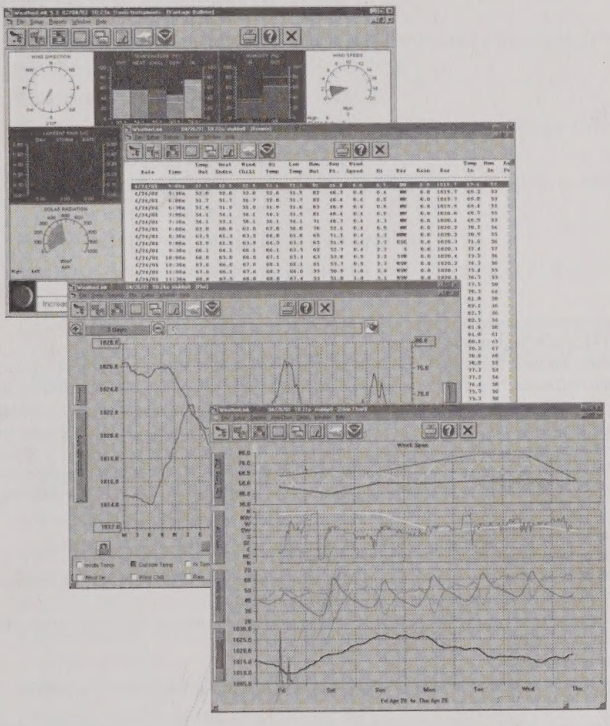
DAVIS

WeatherLink®

For Vantage Pro® and Vantage Pro2™



Getting Started Guide

FCC Part 15 Class B Registration Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved in writing by Davis Instruments may void the user's authority to operate this equipment.

EC EMC Compliance

This product complies with the essential protection requirements of the EC EMC Directive 89/336/EC

Product Number: 6510SER, 6510USB, 6540, 6550, 6560 Part Number: 7395.210
WeatherLink® for Vantage Pro® and Vantage Pro2™ Rev. A October 12, 2004

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Introduction

Welcome to Davis Instruments' WeatherLink®! The data logger and WeatherLink® software let you connect a Davis Vantage Pro®, Vantage Pro2™ console, or Weather Envoy™ to your personal computer so you can store, view, plot, analyze, export, and print weather data collected by the weather station.

Contents of Package

The WeatherLink software is available with two connection types, USB and Serial. Verify which connection type you have.

WeatherLink With USB Connection

The WeatherLink package with the USB connection contains the following:

- Data Logger with USB Mini connector
- USB - Mini B connector cable to connect the console to your computer.
- WeatherLink Software CD

WeatherLink with Serial Port Connection

The WeatherLink package with the Serial connection contains the following:

- Standard Data Logger.
- 8' (2.4 m) cable with connector to link your console to your computer.
- 9-pin (DB-9) PC COM Port Adapter — Use the 9-pin adapter to connect the data logger to a 9-pin serial port.
- Loopback connector — The loopback connector is a short piece of cable with a phone plug at one end and a red plastic cap at the other. The loopback connector can be used to determine what serial ports are available for the data logger and for troubleshooting serial communications problems only.
- WeatherLink Software CD ROM.

Optional Accessories for Serial Port Connection

The following optional accessories, designed for use with WeatherLink, are available from your dealer or may be ordered directly from Davis.

- Telephone Modem Adapter — for data transmission from the data logger using a modem.
- Straight Through 4-Conductor Extension Cable — for more flexibility in the placement of your console, add one 40' (12 m) extension cable to extend the distance between your station and the computer. (48' (14.4 m) maximum)

Computer Requirements

WeatherLink software is compatible with computers running various Windows platforms. WeatherLink is compatible with computers using a serial port connection running the following platforms: 95 (with Internet Explorer 4.0 or higher), 98, 98 SE, ME, NT 4.0, 2000 or XP.

WeatherLink is compatible with computers using a USB port connection running the following platforms: 98 SE, ME, NT 4.0, 2000 or XP.

The amount of space necessary for the data files depends on the archive interval. Database files containing data stored at a 30 minute archive interval require approximately 36K of disk space per month of data. The file size grows depending on the archive interval. For example, data stored at a 1–minute interval requires approximately 1 MB/month while the data stored at a 2–hour interval requires approximately 9K/month.

Other requirements include:

- Windows-Compatible Display — High (16-bit) color setting recommended.

USB Hardware requirements

In addition to the provided hardware, the following are required for a local USB connection between the console and computer.

- One free USB port

Serial Port Connection Hardware Requirements

Listed below are the hardware requirements for creating a local connection and a remote connection.

Local Connection Hardware Requirements

In addition to the provided hardware, the following are required for a local connection.

- One Free Serial Port

Remote Modem Connection Hardware Requirements

In addition to the provided hardware and the computer equipment listed above, the following hardware is required for a remote modem connection.

- One external modem to connect to the data logger — The modem must be Hayes®–compatible and run at 1200, 2400, 4800, 9600, 14400 or 19200 baud.
- One internal or external modem connected to your computer — The modem must be Hayes®–compatible and run at 1200, 2400, 4800, 9600, 14400 or 19200 baud.
- Telephone Modem Adapter — The Telephone Modem Adapter (#6533) provides the connection between the data logger and the modem.

USB Installation

USB Software Installation

Follow the steps below to install the WeatherLink software.

1. Place the WeatherLink software CD in your CD ROM drive.

   The install program should start automatically. If the install program does not start, select Run from the **Start** menu, type D:\SETUP (or the correct letter for your CD ROM drive), and click **OK** to begin the installation.
2. Follow the on-screen prompts to complete the installation.

USB Hardware Installation

The WeatherLink USB connection creates a direct local connection between your computer and your Vantage Pro, Vantage Pro2 console, or Weather Envoy. Included below are the requirements and instructions for successfully installing a weather station and related console connection to your computer.

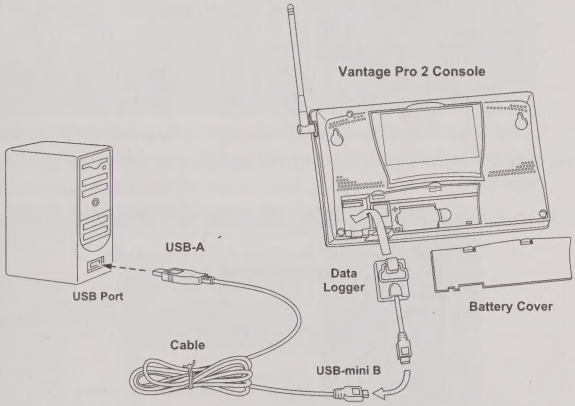
USB Connection Installation

Complete the local USB connection by using the instructions below:

1. Locate the console or Envoy receiving the WeatherLink USB connection.
2. Enter the console's Setup Mode by pressing and holding DONE, then pressing the down arrow (-). Entering Setup Mode ensures that the station is not writing any data and saves the current daily weather information to memory.
3. Remove the battery cover from the console back and remove all power by removing the batteries and AC-power adapter, if present.

Note: Failure to remove power to the console before installing the data logger may cause damage to the data logger or console. Plugging or unplugging the data logger while power is applied can lock up or damage the logger.

4. Carefully insert the USB data logger into the large receptacle marked **EXPANSION** inside the battery compartment.

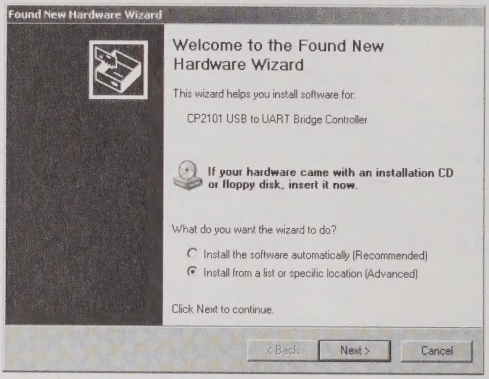


5. Guide the data logger cable through the square slot below the receptacle.
6. Restore power to the console by reinstalling the batteries and reattaching the power adapter, if present. The console beeps three times; each beep occurs within one second of the others. The Envoy beeps twice.
7. Replace the battery cover, ensuring that the data logger cable exits through the square slot.

8. Locate a free USB port on your computer and connect the USB connector to the port.
9. Insert the USB - Mini B connector on the USB connector of the USB data logger. The connection between the console and the computer can be extended up to 16' (5 m) using a USB-to-USB connector cable.

Note: Do not attempt to use more than a 16' extension cable, or the data logger may have difficulty communicating with the computer.

Once the console data logger is connected to your computer, the **Found New Hardware** dialog box displays.

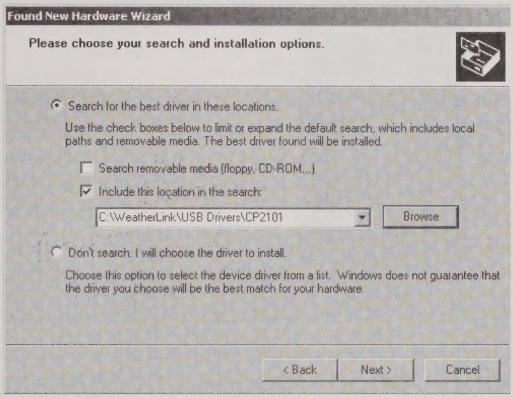


A different **Found New Hardware** dialog box might display the following dialog box first, depending on the operating system platform and your environment.

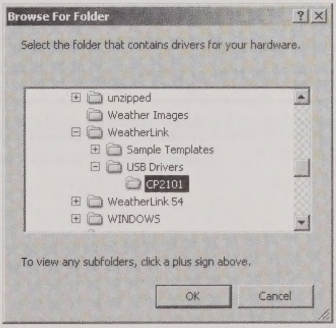
If so, click the **No, not this time** radio button and click **Next** to display the dialog box above.

Note: The **Found New Hardware** dialog box and resulting dialog boxes differ from operating system to operating system. If necessary, consult your operating system's documentation about finding and installing new hardware. No matter what operating system you use, follow the dialog boxes and prompts to select the hardware and drivers from a file.

10. Click the **Install from a list or specific location (Advanced)** radio button and click **Next**. The **Please choose your search and installation options** dialog box displays.



11. Click the **Search for best driver in these locations** radio button.
12. Check the **Include this location in the search:** box and make sure the **Search removable media** box is unchecked.
13. Click **Browse** to select a location for the search. The **Browse for Folder** dialog box displays.



14. Find the directory where you installed weatherlink and select the following folder: WeatherLink/USB Drivers/CP2101.
15. Click OK.

    The **Please choose your search and installation options** dialog box displays again with the selected folder listed in the drop down box.
16. Click **Next**.The selected USB drivers install on your computer.

17. Click **Finish** once the process is completed.

    The Found New Hardware dialog box might display again. If so, repeat steps 10 -17 to continue installing the USB drivers. Once the drivers have been installed, configure the console so that data is transferred between the console data logger and the computer at the same rate.
18. Check the baud rate settings on the console.

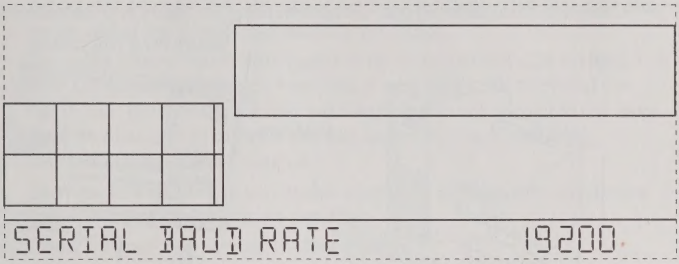
Note: The default value for the baud rate setting is 19200. If you have a Weather Envoy, this value should remain the same in the WeatherLink software.

To display the baud rate settings screen on a console:

Note: The baud rate settings screen displays only if the data logger has been installed.

- Enter the console Setup Mode by pressing and holding DONE, then pressing the down arrow (-).

- Use the BAR and DONE to scroll to the Baud Rate settings screen:



The baud rate setting on the console must be same as that set in the WeatherLink software. Use the up (+) and down (-) arrows to change the baud rate setting, if needed. Press and hold DONE to return the console to the current weather mode.

- Use the fastest baud rate your modem can handle. 19200 is the fastest baud rate available and is the default setting on the console.
- Press DONE when you've got the correct baud rate on the console screen.

Note: The data logger does not require a constant connection with a computer to continue logging and storing data. Although the data logger should remain connected to the console at all times, the data logger only needs to be connected to the computer when data is being downloaded or when the computer is actively using data from the data logger. The data logger and console can be disconnected from the computer if the console is placed in a location where the data logger cable cannot reach. However, WeatherLink's bulletin, summary, or other real-time window displays are only accessible if the console is attached to the computer.

Serial Port Installation

Serial Port Hardware Installation

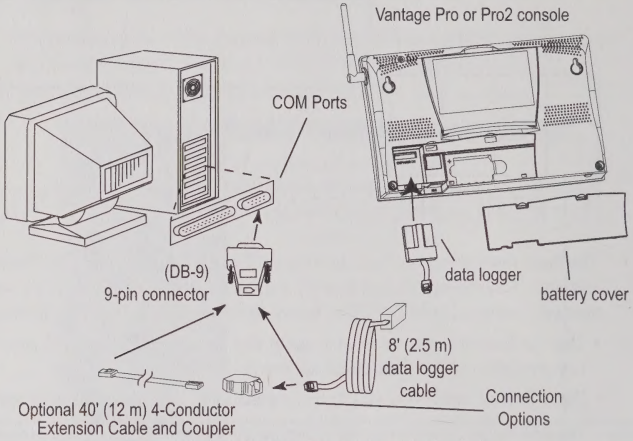
A serial port connection can be installed so that WeatherLink uses a direct, local connection between the computer and console, or so that WeatherLink uses a modem connection to a remote weather station. Installation for each connection type differs, and is explained separately below.

Local Connection

The instructions below explain how to make a typical local connection between your Vantage Pro console and your computer.

Local Connection Installation

Complete the local serial port connection using the figure and instructions:



Connecting your Computer Directly to your Weather Station

1. Find the weather station console receiving the WeatherLink serial connection.
2. Enter the console's Setup Mode by pressing and holding DONE, then pressing the down arrow (-) key. Entering Setup Mode ensures that the station is not writing any data and saves current daily weather information to memory.
3. Remove the battery cover from the console back and remove all power by removing the batteries and AC-power adapter, if present.

Note: Failure to remove power to the console before installing the data logger may cause damage to the data logger or console. Plugging or unplugging the data logger while power is applied can lock up or damage the logger.

4. Carefully insert the data logger with serial connector into the receptacle marked EXPANSION inside the battery compartment.
5. Guide the data logger cable through the square slot below the receptacle.
6. Restore power to the console by reinstalling the batteries and reattaching the power adapter, if present. The console beeps three times; each beep occurs within one second of the others. The Weather Envoy beeps twice.
7. Replace the battery cover, so that the data logger cable exits through the square slot.
8. Locate a free serial port on the back of the computer and connect the DB-9 pin connector to the port.

9. Insert the cable plug at the end of the short cable coming from the data logger into the receptacle on the end of the 8' cable. Then insert the cable plug on the end of the 8' cable into the DB9 connector.

   The cable connecting the data logger to the computer is 8' (2.4 m) long. Use a 40' (12 m) straight through 4-conductor extension cable to extend the connection between the console and computer. Do not attempt to use more than 40' of extension cable, or the data logger may have difficulty communicating with the computer.

   Configure the console so that data is transferred between the console data logger and the computer at the same rate.

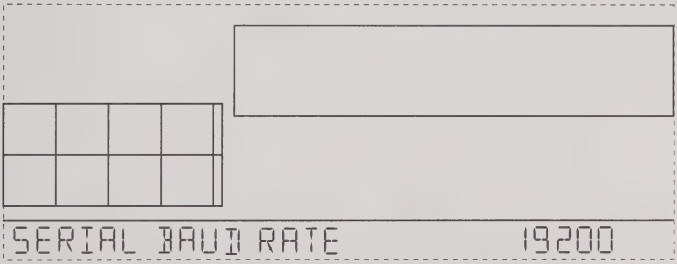
10. Check the baud rate settings on the console.

Note: The default value for the baud rate setting is 19200. If you have a Weather Envoy, this value should remain the same in the WeatherLink software.

To display the baud rate settings screen on a console:

Note: The baud rate settings screen displays only if the data logger has been installed.

- Enter the console Setup Mode by pressing and holding DONE, then pressing the down arrow (-).
- Use the BAR and DONE to scroll to the Baud Rate settings screen:



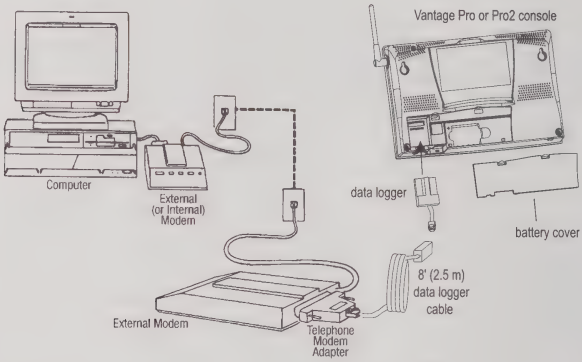
The baud rate setting on the console must be same as that set in the WeatherLink software. Use the up (+) and down (-) arrows to change the baud rate setting, if needed. Press and hold DONE to return the console to the current weather mode.

- Use the fastest baud rate your modem can handle. 19200 is the fastest baud rate available and is the default setting on the console.
- Press DONE when you've got the correct baud rate on the console screen.

Note: The data logger does not require a constant connection with a computer to continue logging and storing data. Although the data logger should remain connected to the console at all times, the data logger only needs to be connected to the computer when data is being downloaded or when the computer is actively using data from the data logger. The data logger and console can be disconnected from the computer if the console is placed in a location where the data logger cable cannot reach. However, WeatherLink's bulletin, summary, or other real-time window displays are only accessible if the console is attached to the computer.

Remote Modem Installation

Use a remote modem installation to connect your computer to a remote Vantage Pro or Vantage Pro2 console. A remote modem installation is a connection from the data logger on the console to a modem that can be dialed and accessed from a computer.



Using Modems to Connect Your Computer and Weather Station

Note: Before installing the console and modem at a remote location, test the data logger and connection first using a direct connection like that shown in the section above.

Remote Modem Installation Instructions

1. Install and set up an internal or external modem (according to the instructions supplied by the manufacturer) for use with your computer. Make a note of the COM port used by the modem. This information is used when entering serial port settings for the weather station and console.
2. At the station console site, put the external modem in a location where it can connect to both the logger and a phone jack and plug it into the phone jack.

Note: Do not turn the modem on at this time.

The cable connecting the data logger to the modem is 8' (2.4 m) long. Use a 40' (12 m) standard 4-conductor extension cable to extend the connection between the console and modem. Do not attempt to use more than 40' of extension cable, or the data logger may have difficulty communicating with the computer.

3. Plug the external modem into the phone jack.
4. Enter the console's Setup Mode by pressing and holding DONE, then pressing the down arrow (-). Entering Setup Mode ensures that the station is not writing any data and saves the current daily weather information to memory.
5. Remove the battery cover from the console back and remove all power by removing the batteries and AC-power adapter, if present.

Note: Failure to remove power to the console before installing the data logger may cause damage to the data logger or console.

6. Carefully insert the serial data logger into the receptacle marked EXPANSION inside the battery compartment.
7. Guide the data logger cable through the square slot below the receptacle.

Note: Make sure that whenever you connect or disconnect the data logger from the console that the console is not powered up. Plugging or unplugging the data logger while power is applied can damage or lock up the data logger.

8. Connect the Telephone Modem Adapter to the external modem.

Note: Do not use a DB25 (not included) adapter and a gender changer to attach the logger to a modem because it will not work.

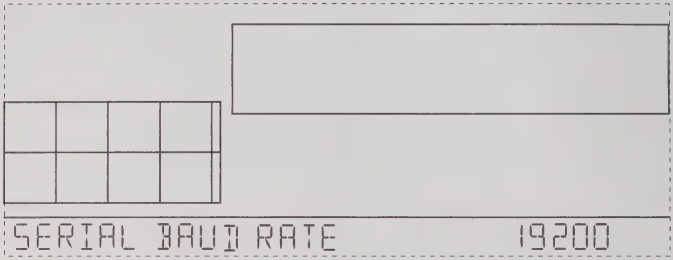
9. Insert the cable plug at the end of the cable into the Telephone Modem Adapter.
10. Turn the modem ON.

    Turning the modem on at this point allows it to receive the modem initialization string from the console.
11. Restore power to the console by reinstalling the batteries and reattaching the power adapter, if present.

    The console beeps three times; each beep occurring within one second of the others. The Weather Envoy beeps two times, also occurring within one second of each other. Once power has been returned to the console, the Setup Mode is automatically displayed.
12. Replace the battery cover, so that the data logger cable exits through the square slot.

13. Check the baud rate settings on the console. Use the BAR and DONE to scroll to the Baud Rate settings screen:

Note: The default value for the baud rate setting is 19200. If you have a Weather Envoy, this value should remain the same in the WeatherLink software. The baud rate settings screen displays only if the data logger has been installed.



The baud rate setting on the console must be same as that set in the WeatherLink software. Use the up (+) and down arrows (-) to change the baud rate setting, if needed. Press and hold DONE to return the console to the current weather mode.

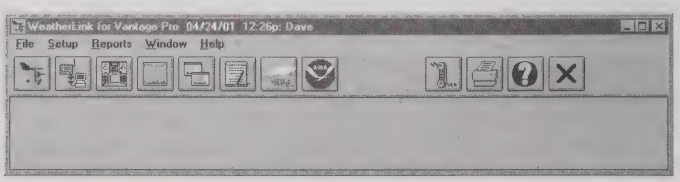
- Use the fastest baud rate your modem can handle. 19200 is the fastest baud rate available and is the default setting on the console.
- Press DONE when you've got the correct baud rate on the console screen.

  Pressing DONE in this screen sends the initialization string to the modem, so you don't have to turn the console on and off again.

Remote Modem Connection Notes

When accessing a remote modem connection, WeatherLink automatically dials the station and console whenever an action has been performed in the software that requires it to talk to the station.

While connected to a remote station, an **On-Line** icon displays in the toolbar. This icon indicates that WeatherLink has established a connection with the remote console and weather station. Select the **On-Line** icon from the toolbar or select Hang Up from the **File** menu to disconnect the phone connection.



Toolbar with On-Line Icon

By default, WeatherLink hangs up the connection to the modem after one minute without any communication with the station. Use the **Serial Port** dialog box in the **Setup** menu of WeatherLink to change this default value. (See the WeatherLink help files for more information.)

Note: WeatherLink does not hang up the phone line if the bulletin, summary, or other windows receiving real-time data from the console are active.

Serial Port Software Installation

WeatherLink software is compatible with computers running various Windows platforms. WeatherLink is compatible with computers using a serial port connection running the following platforms: 95 (with Internet Explorer 4.0 or higher), 98, 98 SE, ME, NT 4.0, 2000 or XP.

1. Place the WeatherLink software CD in your CD ROM drive.

   The install program should start automatically. If the install program does not start, select Run from the **Start** menu, type D:\SETUP (or the correct letter for your CD ROM drive), and click **OK** to begin the installation.
2. Follow the on-screen prompts to complete the installation.

Software Setup

It is easy to setup WeatherLink on your computer once the connection to your console has been configured. Walkthrough the following to setup and configure your WeatherLink software and the connection to your console.

Running the Software

To run the software, double-click the **WeatherLink** icon. If no stations have been assigned in the program directory, the software prompts you to add a station (see below for details). If there is more than one station in the program directory when the application opens, the last station that was displayed is automatically opened.

Station Setup

Each station connected to the computer must have its own station within the software. This tells the software which database to store the new data, provides the necessary communication settings (serial port, baud rate, etc.), and explains other station-specific information.

Adding a Station

1. Select New Station from the **File** menu. The **New Station** dialog box displays.
2. Type the desired station name (up to 40 characters/spaces) into the **Station Name** text box. The software uses the first eight characters of the station name (not counting spaces or punctuation marks) as the name of the direc-

tory into which it saves this station's database and configuration files. The first eight characters of each station name must, therefore, be unique.

3. Click **OK** to save the new station or click **Cancel** to exit without saving.

   The software saves the new station, creates a directory and a configuration file for the station, and prompts you to enter the walk-through procedure.

About the Walkthrough

The software includes a station setup walkthrough that steps you through the weather station configuration procedures. After adding a new station, the **Walkthrough** dialog box automatically displays. By selecting **Yes**, the walkthrough process begins. By selecting **No**, the Walkthrough process is exited. You can set up and configure your station by separately selecting all of the necessary setup options from the **Setup** menu. A Walkthrough option is included in the **Setup** menu that allows you to access the Walkthrough at any time.

Note: When necessary, the software automatically dials a phone modem station.

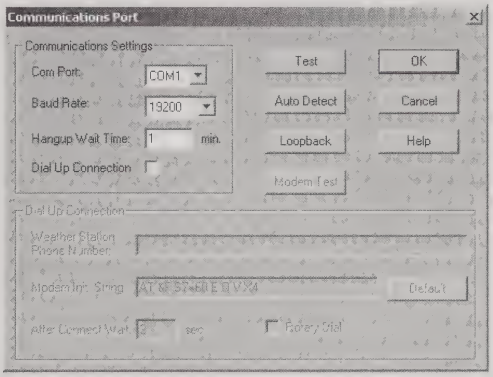
By selecting the Walkthrough process, the software displays a series of dialog boxes. At each step in the Walkthrough process, confirmation boxes are provided to perform or skip the next step in the Walkthrough. To continue, select **OK**. To skip this step and move to the next step, select **Skip**. To cancel the entire walkthrough process, select **Cancel**.

Note: Please refer to the WeatherLink Help for more information about the Walkthrough and about the different setup options.

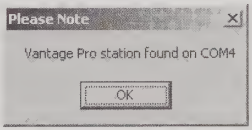
Communication Port Settings

WeatherLink contains a dialog box for locating the communications port (either USB or serial) that the data logger and console are connected to. Use the **Communications Port** dialog box to select the communications port that is used to communicate with the console.

1. Select Communications Port from the **Setup** menu or use the Walkthrough to display the dialog box. The **Communications Port** dialog box displays.



2. Click **Auto Detect**. The program searches for the port that the console is connected to. When the correct connection is found, the following dialog box displays:



3. Click **OK**. The **Communications Port** dialog box displays with the correct port selected.
4. Click **OK** to select the port and exit the dialog.

Updating Previous Versions

Starting with Version 5.2, WeatherLink has stored additional sensor data in the weather database. Data files from earlier releases do not contain the additional data and should be converted first before they are used in the latest version of the WeatherLink software. The following procedures explain how to convert older WeatherLink data files for use with WeatherLink 5.2 and later. If you are updating from version 5.0 or 5.1, there are also instructions on how to retrieve additional existing data from your Vantage Pro data logger and incorporate it with your weather data files.

Database Conversion

If you have an existing weather database from WeatherLink 5.1 or earlier (including versions of WeatherLink 3 and 4), there are two ways to convert those files for use by versions of WeatherLink 5.2 or later.

Convert a WeatherLink Station

This method converts all the data files in an existing WeatherLink station directory and retains the previously entered station configuration data.

1. Install the new version of WeatherLink in a new program folder.
2. Copy the station folder from the previous WeatherLink program folder to a WeatherLink 5.2 or later program folder.
3. Use the Open Station command in the **File** Menu to open the copied station folder. WeatherLink automatically detects that the station was created by a previous version of the software and asks to convert the data and station.
4. Click **OK** to convert the station configuration, including the weather data files. WeatherLink automatically creates a backup copy of the old files and then converts them for use by versions of WeatherLink 5.2 or later.

Import Data Files

The Import Database Files menu option allows you to select individual files or groups of files to be converted for use by WeatherLink 5.2 or later.

Note: WeatherLink does not import database files created by versions of WeatherLink 5.2 or later using the Import Database File option. The Import Database Files option only imports database files created by WeatherLink version 5.1 or earlier. To import data files from WeatherLink 5.2 to 5.4, copy the .wlk file directly into your weather station directory.

1. Open WeatherLink 5.2 or later and select Import Database Files from the **File** menu. The **Browse** dialog box displays.
2. Select the data files you want to import. Select one file or multiple files in the same folder.
3. Click **Open** to convert the selected files. These files are put into a subdirectory called "Converted Database Files".
4. Copy the converted files to your station directory.
5. Reopen the station in WeatherLink to view the converted files.

Retrieving Data From the Data Logger

The data loggers for Vantage Pro, Vantage Pro2, and Weather Envoy contain data and weather variables that were not used by WeatherLink 5.0 or 5.1, such as UV, solar radiation, rain rate, and ET (Evapotranspiration). Versions of WeatherLink 5.2 or later allow to view and use these variables that earlier versions did not. Depending on the archive interval used on your data logger, up to 200 days of this data may be stored on the data logger that you can retrieve and incorporate into a version of WeatherLink 5.2 or later.

To incorporate this data into WeatherLink 5.2 or later data files:

1. Select New Station in the **File** menu and create a temporary weather station folder. (See Adding a New Station for more information)
2. Select Download in the **File** menu or click on the **Download** icon.WeatherLink does a full download of all data stored in the data logger.
3. Select Browse in the **Window** menu or click on the **Browse** icon.
4. Scroll to the beginning of the data file, and write down the time and date of the first entry in the database.
5. Open the original WeatherLink station using the Open Station option in the **File** menu.
6. Select Browse from the **Window** menu or click on the **Browse** icon.
7. Select Delete Records in the **Browse** Menu.
8. Select records for the days following the earliest date in the temporary station database.

Note: Do not select the records for the day the temporary database begins. Each record can be deleted individually for that day in the next step.

9. Individually select and delete each record in the data base that is dated after the earliest record in your temporary database from the Browse Window.

Note: WeatherLink only downloads data for dates and times not already in the database. Deleting records allows it to download new data.

10. Select Download in the **File** menu or click on the **Download** icon to download data from the data logger.
11. Select Delete Station in the File menu and select the temporary station you created in Step 1 to delete it from the list of stations currently in use.

Recalculate THSW Index

WeatherLink 5.3 and later support a new derived data parameter, the Temperature Humidly Sun Wind (THSW) Index. If your station contains a solar radiation sensor, this value can be calculated for existing data by selecting the Recalculate THSW Index command in the **Browse** Menu, which is displayed when the Browse window is open.

Note: Be sure to verify that the latitude and longitude settings and daylight savings time settings are correct before using this command.

Troubleshooting Guide

The following section answers some of the most commonly asked questions about WeatherLink. Please consult this guide and the on-line help files before contacting Technical Support.

Contacting Davis Technical Support

Phone Support:

(510) 732-7814 – Monday – Friday, 7:00 a.m. – 5:30 p.m. Pacific Time.

(510) 670-0589 – Technical Support Fax.

E-mail Support:

support@davisnet.com – Technical Support e-mail.

info@davisnet.com – General e-mail.

www.davisnet.com – Davis Instruments' website. Includes Weather support information.

Communications Problems

? ***Why can't WeatherLink communicate with the data logger and station?***

If you are having trouble establishing communication between the weather station and WeatherLink, start by checking the console's own diagnostics. Remove all power to the console and restart it by restoring power (with the data logger still attached).

Note: The data logger uses non-volatile memory, so any previously recorded data is still stored. However, put the console in Setup Mode (by pressing and holding DONE, then pressing the down arrow(-)) before removing power, so that no damage to the data logger occurs.

- Three beeps emit from the console, each of which occurs when the weather station passes one of its diagnostic tests. Each beep follows the previous after about one second. The first beep notes that the processor is running. The second beep emits when the data logger is detected (if installed) and the third beeps for the display. If using a Weather Envoy, two beeps emit when it passes the first two diagnostic tests.

Note: If you do not hear one or more of these beeps, contact Davis Instruments. Only two beeps emit if the data logger is not installed.

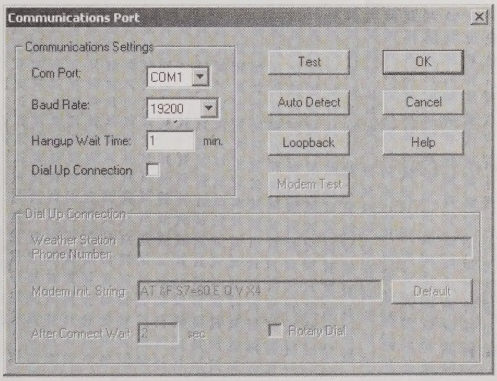
- If the console sends three beeps or the Envoy sends two beeps, See "Communication Port Settings" on page 14 for instructions on checking standard port settings. If the port settings or the loop back test process identifies a serial port other than the one selected in station setup, try connecting to the data logger again.
- Check the serial port adapter if using a serial port connection. Use only the blue serial port adapter supplied with WeatherLink. Older models, or models not supplied in the WeatherLink connection kit are not compatible.
- Check the Baud Rate setting on the console and in the **Communication Port** dialog box in the software. Make sure they have the same number. Enter the console's Setup Mode by pressing and holding DONE, then pressing the down arrow (-) on the console.

- Scroll through the setup choices by pressing BAR or DONE until you reach the Baud Rate screen. This screen only appears if the data logger is plugged into the console.
- Test the serial port using the provided loopback connector. Use the **Loopback** button (as opposed to the **Test** button) in the **Communications Port** dialog box to test and find the correct serial port connection and, if a communications problem exists, it determine whether the serial port or the data logger is not communicating properly. The loopback function also detects and reports the presence of any modems.

  Use the loopback connector (the short cable with a phone jack on one end and a red plastic tip on the other) supplied with a Weatherlink serial port connection package.

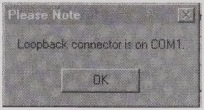
Loopback connector

- If necessary, disconnect the cable between your console and the adapter connected to the COM port.
- Insert the loopback connector into the adapter.
- Select Communications Port from the **Setup** menu. The **Communications Port** dialog box displays.



- Click **Loopback**.

  The software searches all standard ports and displays the COM port name where the loopback connector is located.



  The correct COM port is automatically selected in the **Communications Port** dialog box. If the loopback connector is not found on any COM port, your serial port may not be working. If a connection does still not exist or if the loopback test identifies the same serial port you have selected, eliminate the following possibilities:

Note: Contact your PC vendor or technical support for more information on these device difficulties.

- Hardware device conflict — Check the Device Manager tab in the Windows System Properties dialog box to ensure that Windows recognizes the selected COM port. Consult your computer's documentation to see how to access the System Properties dialog box.
- **The communication port uses a non-standard device name** - WeatherLink recognizes serial ports named COM1 through COM10 only. To use a modem, specify the underlying COM port on your PC. To find out which port the modem's connected to, display Windows' System Properties > Device Manager > "modem name" Properties > Modem > Port, and check the listed "modem name" is the modem name you installed.
- Your serial port is defective.
- The loopback connector or the WeatherLink adapter plug is bad.

Program Problems

? ***The barometer graph on the Bulletin does not "fill in" completely.***

When you first load the bulletin, the barometer graph will only fill in completely when you have data in your database for the last six hours. Make sure of the following:

- There is data in your database for the span of the barometer graph.
- The time and date of the stored barometer data is correct in your database.
- The time and date on the PC is correct.
- The time and date on the weather station are correct.

? ***No wind direction reading (or dashes instead of a reading) appears in my database.***

Be aware that if there is no wind speed when the direction is being sampled, wind direction is not recorded. During intervals with very little wind speed, no direction may be recorded.

Note: Since high wind speed is sampled more often, it is possible to have a high wind speed but no wind speed or direction.

? ***WeatherLink says "No new data to download" but I know there's data there. What can I do?***

The Vantage Pro2 system is smart enough to send only data it hasn't already sent to the computer. So, when you initiate a new download, the program will retrieve the first record after the last record shown in the WeatherLink's Browse Window. Older data is stored in the logger as a backup. To see how many of these backup records are stored in the logger, create a new station and download the data into this new database. Because there are no records stored in the station you just created, WeatherLink will download everything it has stored.

Next, try clearing the archive memory using the clear dialog box. You will lose any data not already downloaded in your archive memory, but all of your calibration numbers and alarm settings will remain intact. If this doesn't work, reboot your weather station (that is, remove, then restore all power to the station).

Note: Make sure to put the console in Setup Mode (by pressing the DONE and DOWN arrow keys) before removing the batteries. The ensures the station will not try to write any data when the power goes off.

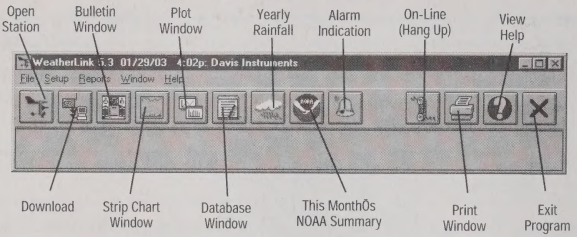
? ***When viewing data, dashes appear in place of a value for functions other than wind direction. Why?***

If no data was recorded by a sensor (for example, the sensor was disconnected or radio interference blocked reception) or if bad data was recorded for a sensor (for example, the sensor was malfunctioning), the software dashes out the entry rather than showing invalid data. You can use the record editor to correct these entries.

? ***The data I want to see, such as solar radiation, soil moisture, or Temp 2 is missing completely or is greyed-out?***

All optional sensors must be enabled in the Station Configuration setup dialog box before the data will be displayed in WeatherLink. If you are not seeing data from a sensor that is installed in your weather station, be sure check the Station Configuration in the Setup Menu and make sure the sensor has been selected.

Toolbar Icons



Hot Keys

Main Program Window

Ctrl-A . . . . . Set Alarms
Ctrl-B . . . . . View Bulletin
Ctrl-C . . . . . Station Configuration
Ctrl-G . . . . . Degree-Days Report
Ctrl-H . . . . . Hang Up
Ctrl-I . . . . . Communications Port Settings
Ctrl-J . . . . . Automatic Download
Ctrl-K . . . . . Walkthrough
Ctrl-L . . . . . Download
Ctrl-O . . . . . Open Station
Ctrl-P . . . . . Print Active Window
Ctrl-Q . . . . . Open Plot Window
Ctrl-R . . . . . Yearly Rain Report
Ctrl-S . . . . . Open Strip Charts
Ctrl-T . . . . . Set Time
Ctrl-U . . . . . Select Units
Ctrl-V . . . . . View Download Log
Ctrl-W . . . . . Browse Database
Ctrl-X . . . . . Auto Fax Settings
Ctrl-Y . . . . . View Summary
Ctrl-Z . . . . . Close Window
F1 . . . . . Context-Sensitive Help
F2 . . . . . Sunrise/Sunset Report
F7 . . . . . NOAA This Month
F8 . . . . . NOAA This Year

Strip Chart Window

ESC . . . . . Halt redraw
Ctrl-M . . . . . Make Default
Ctrl-P . . . . . Print Strip Chart
F1 . . . . . Context-Sensitive Help
F3 . . . . . Zoom In
F4 . . . . . Zoom Out

Plot Window

ESC . . . . . Halt redraw
Ctrl-D . . . . . Choose Date
Ctrl-M . . . . . Make Default
Ctrl-P . . . . . Print Plot
F1 . . . . . Context-Sensitive Help
F3 . . . . . Zoom In
F4 . . . . . Zoom Out
F9 . . . . . Overlay Plots
F10 . . . . . Last Year Plot

Database Window

Ctrl-D . . . . . Choose Date
Ctrl-N . . . . . Add Note
Ctrl-P . . . . . Print Records
Enter . . . . . Edit Record
Delete . . . . . Delete Record
F1 . . . . . Context-Sensitive Help

Yearly Rainfall Window

Enter . . . . . Edit Year
Delete . . . . . Delete Year

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